## REFERENCE 1



### Westinghouse Idaho Nuclear Company, Inc.

PJH-18-85

From : Phone : P. J. Hult

6-3413

Date

July 16, 1985

Subject:

PCB/Radioactive Contamination Cleanup in CPP-718

📑 W. P. Palica, Project Engineer Line Item Projects

cc: R. J. Bliss

S. C. Cooper

R. F. Graefe

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R. J. Marcinko

T. M. Nash

T. F. Pointer

D. J. Poland

F. K. Wrigley

D. L. York

The attached approved guidelines have been prepared to direct the cleanup of PCB/radioactive contaminated areas on the transformer concrete pad in CPP-718.

If you have any questions, please call me at 6-3413.

P. J. Hult, Field Coordinator UREP SS Phase II Project

/1s

A task of the UREP Substation Phase II Project is the removal and disposal of a concrete transformer pad. During a recent radiation survey of the pad, two radioactive contaminated areas were found. These radioactive contaminated areas must be cleaned up prior to disposal of the pad. However, since the pad is also PCB contaminated, cleanup guidelines for both radioactive and PCB contamination must be followed.

#### I. CLEANUP GUIDELINES

### A. Health and Safety

Human exposure to polychlorinated biphenyls (PCBs) will be minimized to protect the health and safety of workers involved in the cleanup activities. Cleanup personnel will be required to obtain a Construction Safe Work Permit for each shift. This permit will be approved by Industrial Safety and will include the necessary protective requirements. WINCO will provide the necessary protective clothing, eye protection, and respirators.

A training session (estimated / hr. long) will be required of all personnel involved in the removal of the radioactive/PCB contaminated material. This training will cover general health and safety hazards associated with PCB contaminates and the appropriate safeguards and work practices to be followed. This training will be coordinated through the WINCO Production Training Section.

### Protective Clothing

Protective clothing that is impervious to PCBs will be worn in situations where workers may come into contact with PCBs or PCB contaminated materials. This clothing consists of impervious paper-like coveralls (Saranex Tyvek-laminated coveralls), plastic overshoes, and rubber-like gloves (Viton).

### 2. Eye Protection

Safety glasses with side shields will be worn during any operation in which solid PCBs are present. If liquids or solids containing PCBs contact the eyes, the eyes shall be irrigated immediately with large quantities of water and then be examined by a physician or other responsible medical personnel. Portable eyewash units will be located at the cleanup site (by others).

#### 3. Respiratory Protection

It has been determined by Industrial Safety that respiratory protection is required for this cleanup activity. The recommended respirator is a full-face respirator with an acid/gas/organic vapor cartridge with a high-efficiency prefilter.

### B. General Health and Safety

- 1. Facilities for shower baths will be provided for workers exposed to PCBs. After working with PCBs, workers will shower before changing into street clothing.
- Workers exposed to PCBs will be advised to wash their hands and exposed skin before eating, drinking, smoking, or using toilet facilities.
- Food, drink, or smoking materials will not be permitted in areas where PCBs are handled.
- 4. To reduce injuries, hard hats will be worn and safe work practices will be followed.
- Ear plugs or ear muffs will be used when utilizing the electric tools.

### II. CLEANUP ACTIVITY MONITORING

- A. N&IS personnel shall monitor the cleanup activities to assure compliance with the health and safety regulations for PCB contamination cleanup.
- B. HP personnel shall monitor the cleanup activities to assure complete cleanup of the radioactive areas and prevent the spread of contamination.

#### III. CLEANUP PROCEDURE

- A. An HP shall clearly mark the boundaries of the radioactive contaminated area.
- B. Workmen shall attempt to remove the contaminated areas using a hammer and chisel. Caution shall be used to prevent the spread of concrete chips and contamination.
- C. If contaminated areas cannot be removed by the above method, workmen shall proceed as follows:
  - 1. A barrier of approximate size 5' X 5' with 3' walls made of fireproof wood and plastic sheeting shall be built in a non-contaminated area. Workmen shall install barrier around the contaminated area being worked on.
  - Workmen shall use an electric die grinder to cut the concrete around the radioactive contaminated area to a depth of approximately 1/4 inch. During grinding a vacuum with a HEPA filter (to be supplied by others) shall be held near the cutting disc to pick up the concrete dust.

1

- 3. Workmen shall use a hammer and chisel to remove the concrete within the cut area. Again the vacuum will be held near the cutting tool to immediately pick up any concrete dust or chips.
- 4. When both radioactive contaminated areas have been cleaned up, the barrier shall be removed and disposed of as directed by NaIS and HP personnel.
- 5. Tools used in the cleanup activities shall be thoroughly wiped with rags soaked in diesel fuel.

It shall be the responsibility of the N&IS and HP personnel to determine the final disposal method of the barrier, vacuum contents, rags, tools, clotning, and any other materials used in the cleanup activities. Items containing only PCB-contamination shall be placed in a container for disposal with other PCB contaminated materials to be removed from this area at a later date. Items with mixed contamination shall be placed in a separate container for disposal with materials of mixed contamination to be removed from this area at a later date.

## REFERENCE 2

### SCOPE OF WORK

FUR

# REMOVAL OF PCB CONTAMINATED MATERIAL LOCATED AT

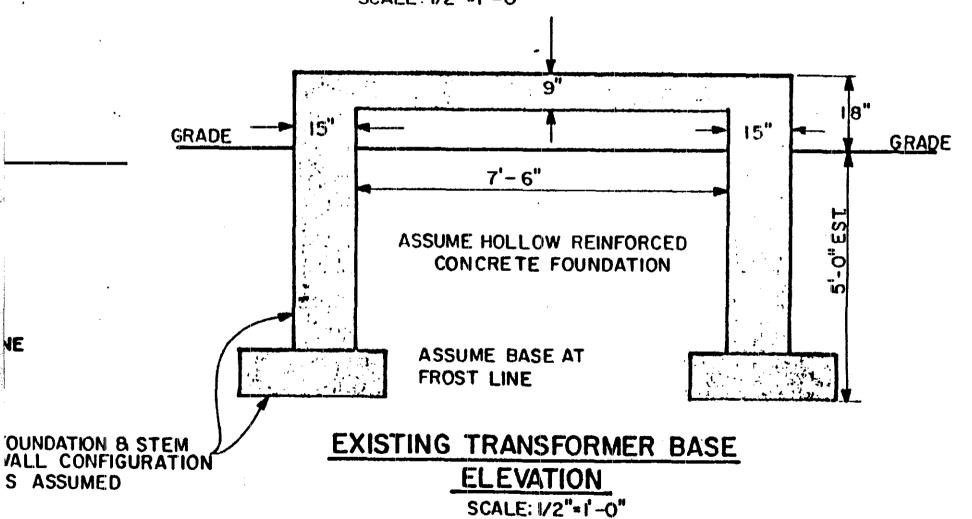
# THE IDAHO CHEMICAL PROCESSING PLANT IDAHO NATIONAL ENGINEERING LABORATORY

- 1. Drain oil (179 PPM PCB) from Transformer XFR-8T2-2 located in the Main Substation (CPP-718) of the Idano Chemical Processing Plant (ICPP). Estimated quantity 4750 gallons, approximately 37,100 los.
- 2. Transport the transformer oil to the Disposal Site.
- 3. Dispose of the transformer oil.
- 4. Prepare XFR-8T2-2 body for shipping (dimensions 185 in. x 126 in. x 191 in. high, approximately 53,000 lb.).
- 5. Load XFR-8T2-2 body from concrete pad to truck.
- 6. Ship XFR-3T-2 body to Disposal Facility.
- Unload XFR-8T2-2 body at the Disposal Facility.
- 8. Dispose of XFR-8T2-2 body.
- 9. Remove PCB contaminated portion of transformer pad (concrete and rebar) that XFR-8T2-2 is sitting on.
- 10. Remove PCS contaminated gravel and dirt in the yard area in the vicinity of XFR-dT2-2 pad.
- 11. Remove PCB contaminated transformer accessories, clothing, and debris.
- 12. Provide PCB sampling and analysis in support of the above Items 1 and 10 through 12.
- 13. Transport PCB contaminated solids (dirt, gravel, concrete, rebar, debris, etc.) to the Disposal Facility.
- 14. Dispose of the PCS contaminated solids.

### **EXISTING** TRANSFORMER BASE **PLAN**

SCALE: 1/2" =1'-0"

NE



# REFERENCE 3

Avon Jack Summer I. General Information JAN 0 4 1991 De Idaho Chemical Proceeding Plant (ICPP) is located at the Idaho national Engineering Laboratory (INEC), 42 miles west of Idako Falls and approximately three miles north of the Central Facilities area. On 1981, a Utilities Replacement and Expansion Project (UREP) to upgrade the two primary transformer at ICPP's, CPP-718 transformer ejard was initiated. Just prior to the summer of 1982, one of the 2400 V transformers was removed in preparation for the installation of a new, larger 13,800 V transformer. Du entire load was placed on the one remaining transformer which was forced to operate with a 30-40% overload. as a result of this overload oil expansion Created an intermettan leak from one of the secondary lushings. The leak was present only during the summer months and the only when the transformer was maximized. Temporary measures to Contain the leak, until a new transformer Could be installed, involved Collecting the oil in 55-gallon drums. An estimated 400 gallons of fluid, Containing 179 ppm of polychlorinated liphenyls (PCB's), leaked from the transformer was drained and out of service on December 22, 1984. The transformer yard was secured and cleanup activities, of the Concrete par and surrounding soil, were then initiated. The 15 ft x 11 ft x 16 ft high transformer was removed and lake to a T/S/D facility on april 2, 1985.

II. Description of Spill Site

The leak from fransformer XFR-8T2-2 occurred at the transformer yard adjacent to the main substation of the ICPP ( ). The 14,000 Sq. ft. yard is surrounded by an 8 ft high cyclone fence. a grounding grid is located 18-24 inches below the surface of the soil. The soil is an allowial deposit of sand, set and gravel with increasing gravel content with depth. a 3-4 inch layer of gravel lies on top of the soil

The 10 ft x8 ft x 6 ft 8 ench Ligh of Lottow reinforced concrete Figure as a safety precaution, before the extent of the spell could be delineated, a health physicist surveyed the surface soil and concre pad for radioactivity. Nine Contaminated soll areas, above a 200 cpm background, ranging from 400 to 2500 com were identified. The location of these areas is shown on Figure. Inaddition, two radioactive areas were found on the concrete pad with and G In order to avoid handling mixed radioactive and PCB contaminated waste, the radioacture Contamin ted soil and concrete were remove from the transformer yard. The guidelines that were developed for the cleanup of the radioactive contaminated areas a in appendix A. The guidelines outline the health and patety procedures that were followed to project cleanup personnel from exposure to PCB's and radioacti

Muclean and industrial Dafety (N+15) and health physics (HP) personnel were present to monitor the cleanly activities and prevent the spread of Confamination.

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To determine the lateral extent of the Contamination, a sampling cless consisting of a hexagonal grid based on equalateral friangles was used This grid design is suggested by the EPa for sampling PCB Spell Sites with a circular area of Contaminate (refrience). Tigure gives détails of the grid design. Figure shows the areas of the Fransformer yard tha were sampled. Surface samples were taken with a hand trager. Ineach case, the surface of the coil beneath the overlying gravel was sampled an examined for oil. Il little or no or was ditectable, Hlaugerwasik to dig down to the uppermost oil Containing layer. In all cases, or was detected within the top 8 inch olpoil. To determine the vertical extent of the Contamination, one hale 2-3 f from the east side of the concrete p was druled down to 12 ft and samples taken every 15 ft. asicon hole, also 2-3ft from the concrete pad was drilled down to 17 ft. Drelling was terminated at 17 ft wa

a cobble layer was encountered, causing the successive shearing of two Volts in the auger.

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Contamination was approacher Soil surface on Helast side of the Fransformer pad.

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# III. Cleanup Process

To prevent unauthorized acces to the speed area, the fence surrounding the transformer yare was locked. To prevent the inadvertant spreading of the confamination beyond the boundare of the speel, plastic sheeting was placed over the concrete pad and Durrounding Contaminated Doll. 10 eliminate exposure to the area the transformer pad and adjacent areas of contamination were partitioned with rope and cas Diring this time, guidelines for to Cleanup of the area were developed a copy of the cleanup plan is in appendix. The EPA region X. Office in Seattle was notified of flespel and approved of the Chamin plan The plan called to the removal of any PCB contaminated soil with a Concentration greater than 10 pps Workers handling any Contaminated materials were trained in the safety hazards associated with PCB "Contaminate

and the appropriate safeguards and work practices to befollowed. Projective clothing, the Safety, glasses and full-face respirate Priest Electric Co was with subcontracted to remove the Contaminated soil. Hand showels were used to remove the for buch of gravel and soil on the last side Of the transformer pad. This soil was placed in double-listed of Si Lott Louis and radioactive good Leofte and lavelled as mit the The top 6 inches of grave ton the remaining three sides of the transformer pad wasnemoved and stock falled for use as backlie The soil on the east side of the concrete pad vetween binches an 18 inches depuras placedin 55-ga drums and labelled as PCB tople withaterial. Chem Startity, Inc. w contracted to dispose of this wast The soil below 18 inches was removed with a vackhoe in 14t increments. These lifts were segregated and the sampled by NI415 Personnel.

apter analysis, each lift was disposed in accordance with EPA Region 10 quide lines. Soil containing less that 10 pg PCB was vackfilled. Soil with a PC concertration greater than 10 ppm we lioped and disposed of off-site. ae soil below binches deporthe rortz south and west sides of the transformer pad contained no significant PCB concentrations. This soil was considered clean and used as backellinsformer de concrete part was renoved intact and fransportsol and disposed of feet U.S. Pollution Contro Inc. all confaminated materials: generated as a result of the cleaning 1. ethe backhoe, should, sage, clothing, were elther deson amust to the placed in Containers and Sent for Atorage area south of ICPP to wait por disposal as required waste. IV. Sampling and Fralegue The sampling and analytical Jechniques are summarized in the cleanup plania popularia ver lortheremoval of any CBC greater than 10-ppb. The t Workerter

## REFERENCE 4

PCB-CONTAMINATED SOIL FROM LEAKING TRANSFORMER XFR-872-2

On April 2, 1985, transformer XFR-8T2-2 was disconnected and removed from UREP Substation II near CPP-613. This transformer had a capacity of approximately 4750 gal and had been leaking for at least 2 years before its removal. It has been estimated that at least 400 gal of transformer fluid, containing 179 ppm PCBs (polychlorinated biphenyls), leaked from the transformer during this time. The leak caused an obvious oil spill in the surficial gravel on the east side of the concrete pad on which the transformer had been located.

Because of federal regulations (CERCLA, TSCA, and DOE orders), it is necessary that all such PCB-contaminated soil be excavated and transferred to a licensed storage facility. As a precaution, the area within the fenced portion of the substation yard was surveyed for radioactivity. In addition to the normal background (200 cpm), nine "hot spots" were found, ranging from 400 to 2500 cpm (see Figure 1).

In order to try to delineate the extent of the spill, a small 7.5-hp auger was brought in along with hand augers. In designing the sampling plan, care was taken to avoid the radioactive spots since the laboratory certified to analyze PCBs cannot accept mixed waste. Care was also taken to avoid the grounding grid located 18-24 in. below the surface (Figure 2).

Using the power auger, one hole was drilled to a depth of 2 ft (Figure 3) and sampled every foot. A second hole was drilled about 2-3 ft from the spill, and samples were taken every 1 1/2 ft (Figure 3). Evidence of oil was observed down to about 12 ft, where drilling was stopped. To ensure that the sampling procedure was not mixing oil-contaminated soil with uncontaminated material at greater depths, a second hole, located approximately 2 ft from the 12-ft hole at about the same distance from the spill (Figure 3), was drilled down to about 10 1/2 ft, where a sample was taken. The next sample taken was at 15 ft. Visual examination and smell indicated that both of these samples also contained oil. Drilling of the hole was terminated when a cobble layer was encountered at 17 ft, causing the successive shearing of two bolts in the auger.

Since the vertical extent of the oil contaminant could not be determined with the equipment at hand, an attempt was made to delineate its lateral extent. Therefore, a number of samples were taken with a hand auger at various distances and directions from the spill (Figure 3). In each case, the surface of the soil beneath the overlying gravel was sampled and examined for oil. If little or no oil was detectable, the hand auger was used to drill a hole down to the uppermost oil-containing layer. In all cases examined, oil was detected within the top 8 in. of soil.

Three 6-8-in.-deep holes were also augered and sampled just outside the fence (Figure 3). Only one of these samples (the one just inside the gate) produced evidence of oil; only a slight oily odor was detected in the others. However, it is likely that higher concentrations of oil are present at lower elevations.

The samples are currently undergoing radiological analysis prior to shipment for PCB analysis. Although oily material was found in every hole augered within the fenced area, it has not yet been ascertained whether all of this material is contaminated with PCBs; some of the oil may be from hydraulic fluid, condensers, etc. In addition, the PCB-bearing transformer fluid that leaked from transformer 8T2-2 may have been retained above the frost line in winter, mixed with other oils and fluids, and spread throughout the entire substation and adjacent areas. Therefore, further evaluation of the extent of PCB contamination in the area awaits the completion of the PCB analyses.

Samples not exceeding a depth of 10 in.

Samples exceeding a depth of 12 in.

Ipproximate location of spill

1 m. \ 14. ft.

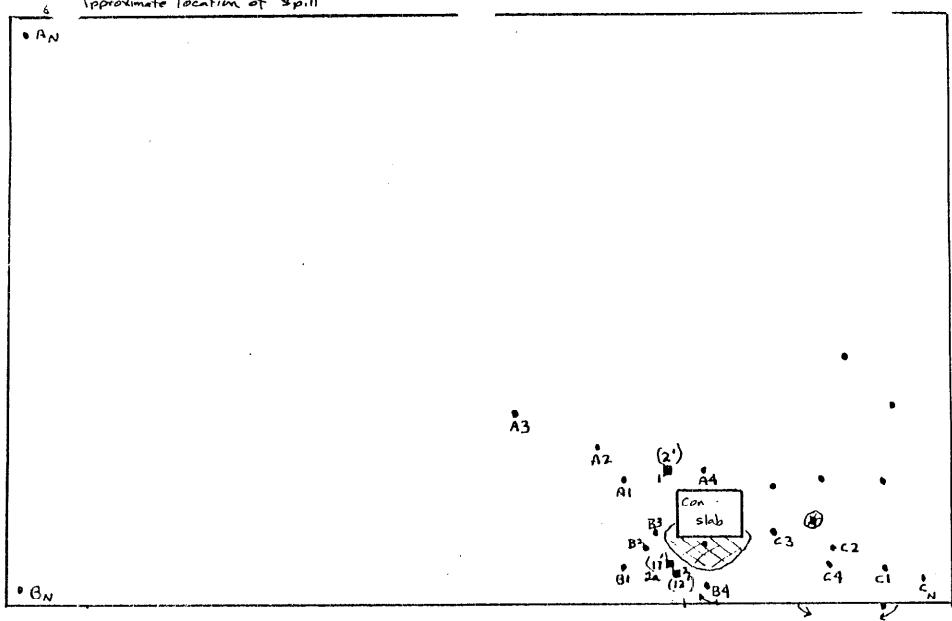


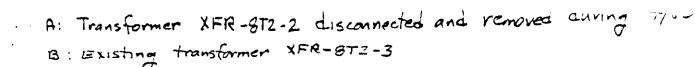
Figure 3. -- Approximate locations of samples laken in and near UREP Substition II.

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	-	2500cpm	*		# 1200 cpm
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		2500cgom	400 cpm *		1200 cpm * 1200 cpm

Approximate location of "hot" spots

10 oil detected on surface of gravel layer

Figure 1. - Approximate Location of Localized Radioschus Material at UREP Substation II.



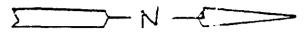
C: Existing relocated transformer XFR-8TZ-1

D: Manhole

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E: Outlear circuit breaken

Scale: 1/2 1. € 10 ft.



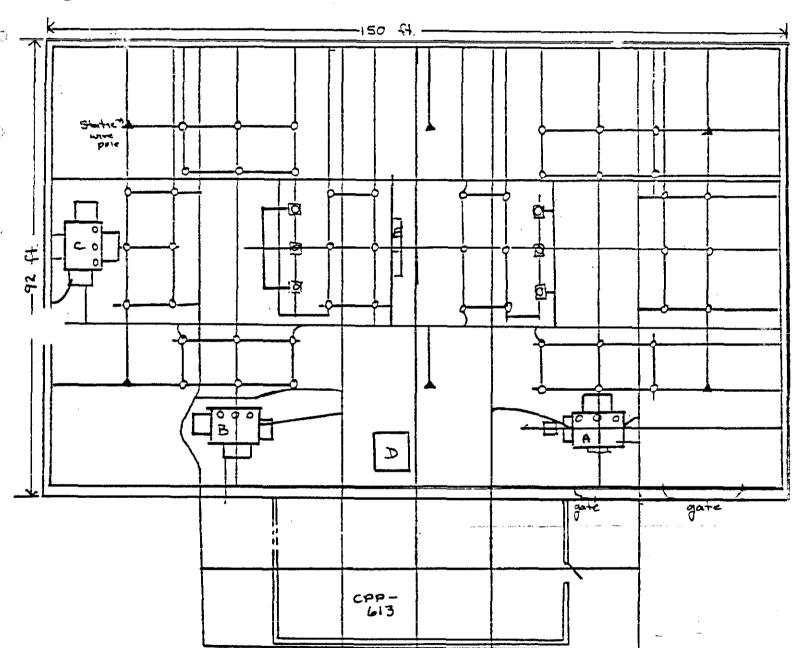


Figure 2 . -- Grounding Grid at CPP-613, UREP Substation II.

### REFERENCE 5

### FINAL REPORT FOR 613 CLEANUP

REPORT FOR : D J POLAND ADDRESS : CPP 430

LOG NUMBER

071710

: CPP 630

PHONE NUMBER :

6-3650

DATE RECEIVED : 07/17/85

DATE COMPLETED: 09/17/85

TIME RECIEVED : 13:10

TIME COMPLETED: 13:43

GWA CHARGED :

14320-530-450

REVIEWED BY : D.R. TRAMMELL

MSA MR/HR : COLD

HAZARD INDEX: ZERO

### COMMENTS:

SAMPLES RETURNED TO JOAN POLLAND 08/29/83

ANALYSIS	METHOD	SAMPLE	ANALYST	RESULTS FOR 071710
	9171	SURPCE 12	ΓMM	· 0.8 UG/GRAM ι 1.1 UG/GRAM
PCB	9171	SURPCB 11 SURPCB 9	LWW	< 0.5 UG/GRAM u 9 UG/GRAM
PCB		SURPC8 4 18-PC8#10	LWM	4 31 UG/GRAM ← < 0.5 UG/GRAM
- 1.6	9171	18-PCB#15 18-PCB#14 SUR-PCB-17	LMM	< 0.5 UG/GRAM < 0.5 UG/GRAM < 0.5 UG/GRAM
PCB	9171		LLW	< 0.5 UG/GRAM < 0.5 UG/GRAM
PCB	9171 9171	30-PCB \$5 30-PCB \$11	LLW	G 1 UG/GRAM 1 0.5 UG/GRAM
<sub>#</sub> PCB		42-PCB-8 42-PCB-9	LMM	9 4.2 UG/GRAM 1 0.7 UG/GRAM
PCB PCB		54-PC8-6 66-PC8#6	LWW	№ 3.3 UG/GRAM 1 2.9 UG/GRAM
		72-PC8#20 54-PC8-1	LWW	<pre>'&lt; 5.2 UG/GRAM &lt;0.5 UG/GRAM</pre>
PCB PCB	9171	66-PCB-1 54-PCB-4	LWW	<0.5UG/GRAM 13 0.7 UG/GRAM
PCB PCB *	9171 9171	66-PCB-4 54-PCB-3	Г <b>ИН</b> Г <b>ИН</b>	<0.5 UG/GRAM <0.5 UG/GRAM

ANAL	S	METHOD	SAMPLE	ANALYST	RESULTS FOR 0717	10
PCB		9171	66-PCB-3	 LWW	4 0.9 UG/GRAM	148700
PC8		9171	18-FCB-2	FÄÄ	<0.5 UG/GRAM	
PCB		9171	30-PC8-7	LHM	<0.5 UG/GRAM	C-3
∍CE		9171	24-FCB-16	LWW	√ 2.5 UG/GRAM	-1
08		9171	78-PCB-20	LWW	4.0 UG/GRAM	<del></del>
P C E		9171	72-PC8#20R	LWW	17 5.0 UG/GRAM	
PCB		9171	72-PCB#20R	LHH	' <sup>e</sup> 5.4 UG/GRAM	
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## REFERENCE 6

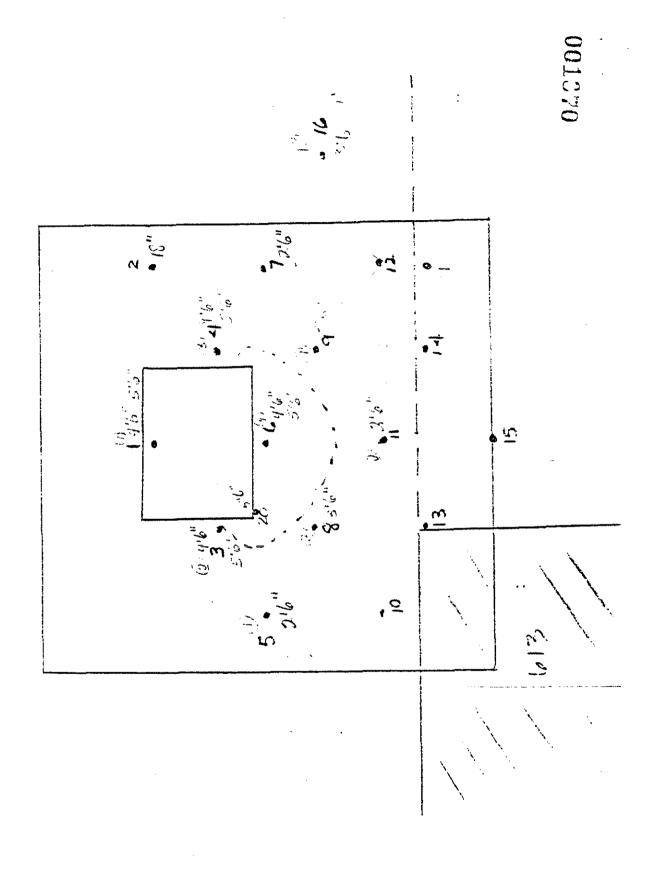
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Coordinates re NW
Sample
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            WN
                 16'8"W
            1411
             211
                 12'6"W -
                              + Su.,
             10'N 12'6"W -
             21 NS 912"W 2"6"
  $
             61N 9'2"W
  6
             14'N 9'2"W
  7
             21N 5110"W 5
  8
             101N 5110"W 7 3
  9
             2' NS 187W 13"
  10
             6'N 1'8"W
  11
            14'N 1'8"W
  12
             21 N 1'3' = No Sample
  13
            10'N 1'3" # 15"
  14
  15
           29'10"N 515"W ~24"
  16
  17
           6'N 1'
                    E
                        July.
  18
           10'N 1' E
           16 N 11 3
          2'N 16'10 Finning (2E) NG'
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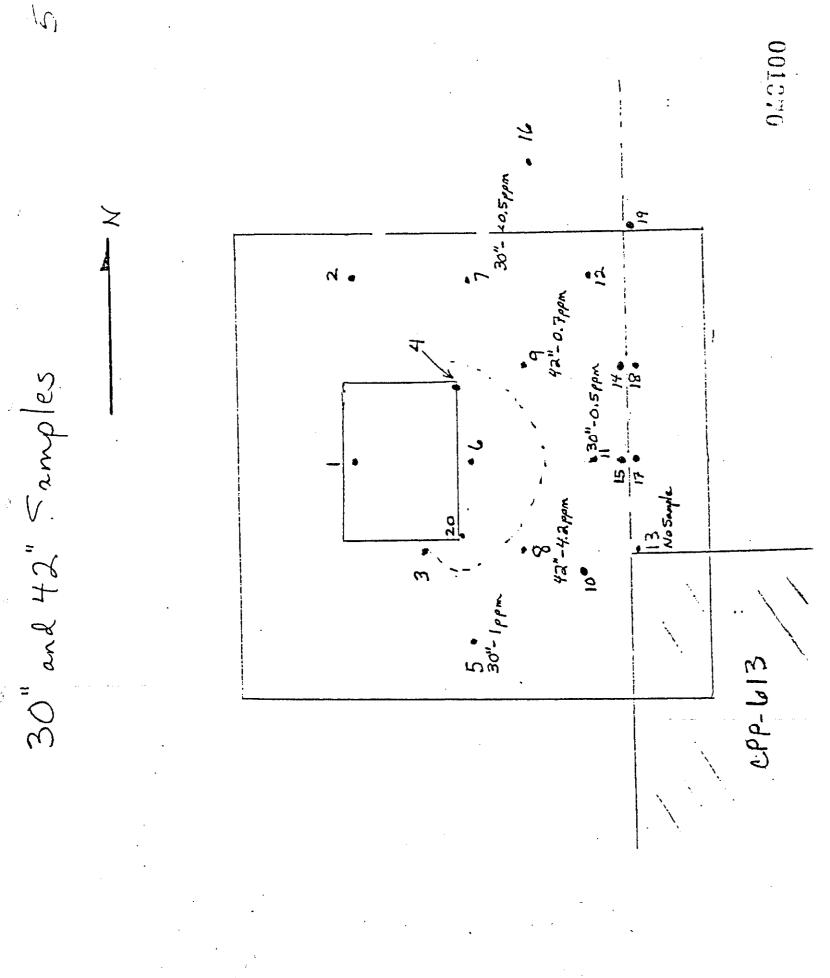
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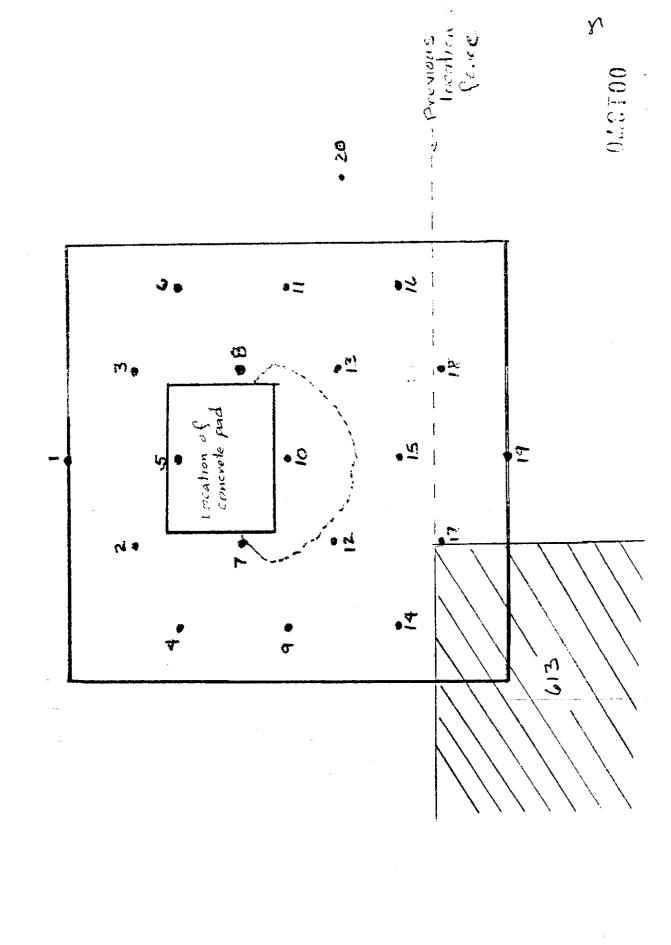
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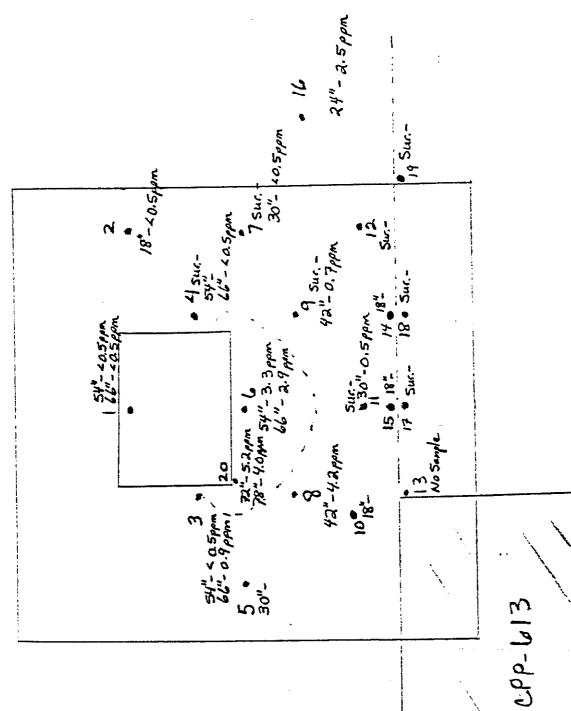
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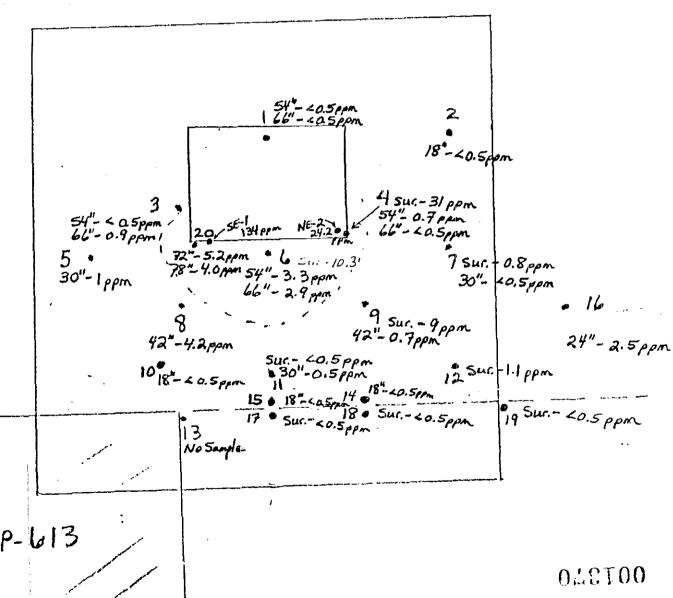




8" and 24" Samples

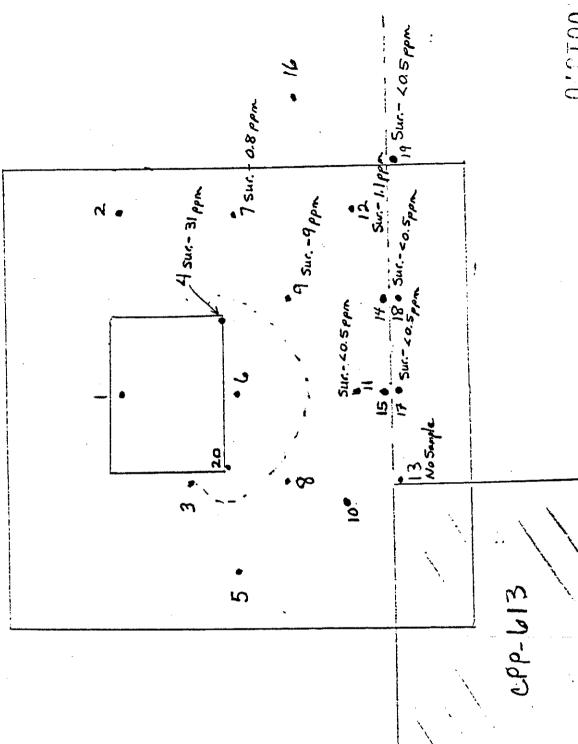


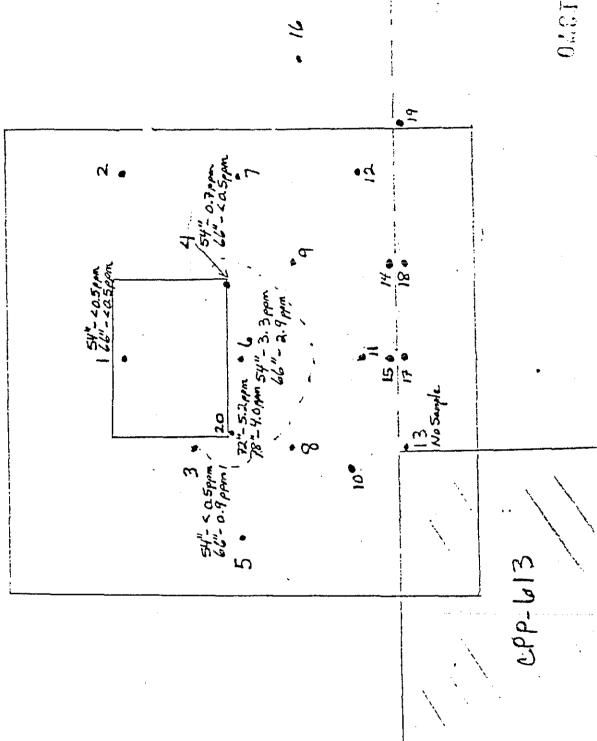




CPP-613

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54,66, td, and 18 Samples

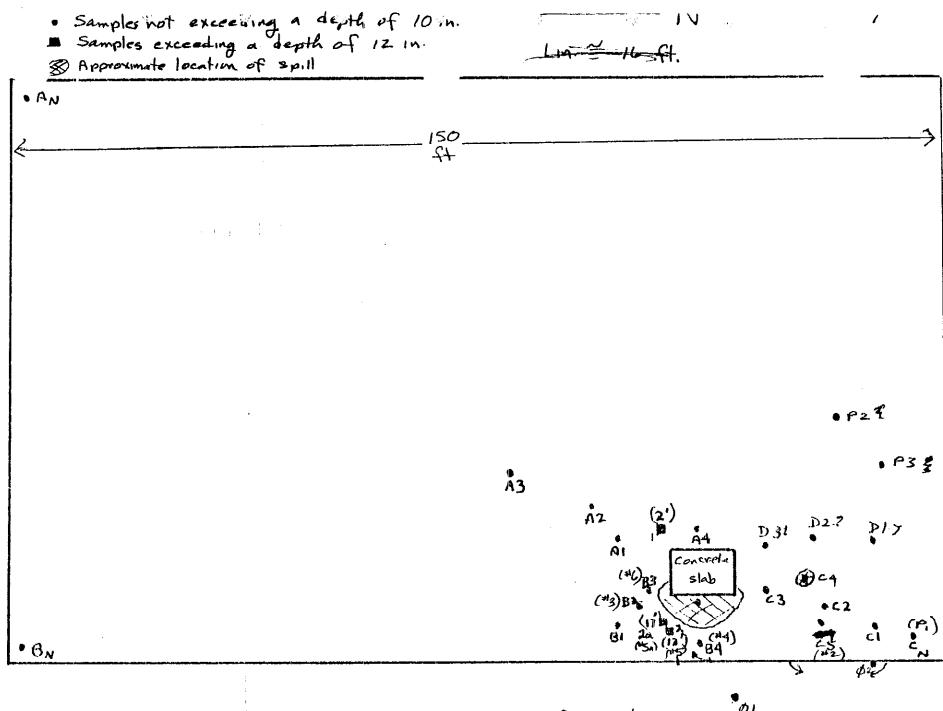
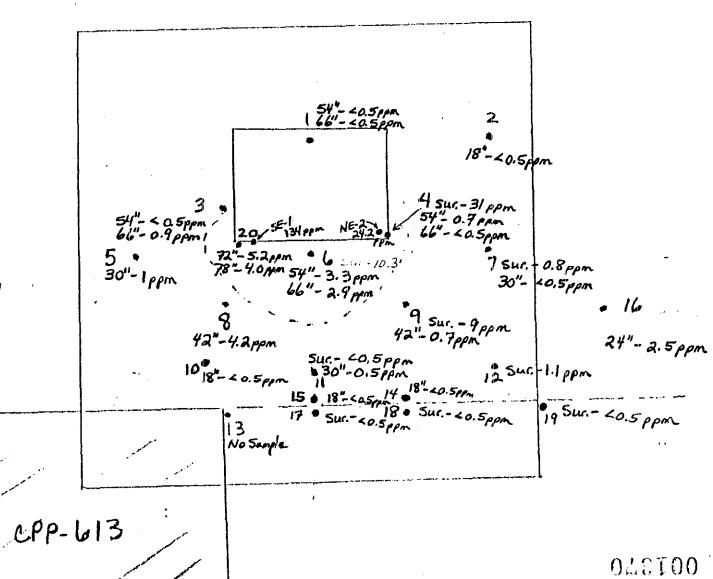


Figure 3. -- Approximate locations of samples taken in and near UREP Substation II.

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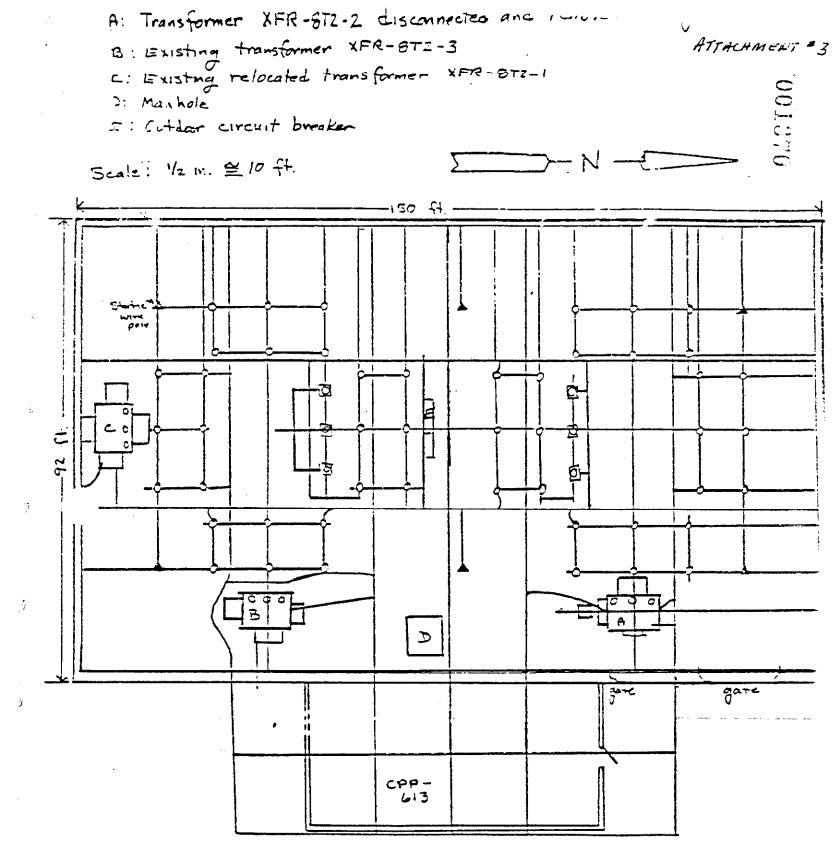


Figure 2 . -- Grounding Grid at CPP-613, UREP Substation II.

Trom: S. C. Cooper

hone: 6-4207

Date: August 8, 1986

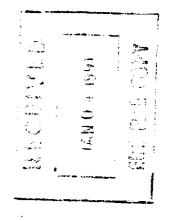
Subject: Accomplishments re RCRA and CERCLA

cc: KAK

AJM

TFP

DJP



#### <u>Hazardous Waste Minimization</u>

A task force was formed to minimize the waste generated at the ICPP. Hazardous waste generated by the ICPP (Idaho Chemical Processing Plant) will be reduced by at least 18,590 gal/yr when the recommendations of the task force are implemented. The initial cost for the changes will be \$82,900, and cost savings are expected to be \$495,500/yr.

### Completion of the Installation Assessment Report

The Installation Assessment Report (CERCLA, Phase I) was completed for the ICPP in May 1986. The assessment includes 38 sites which have been identified as CERCLA/RCRA sites because they are known to have received operational or accidental releases of hazardous, radioactive, or adioactive/hazardous (mixed) wastes.

#### Completion of Closure Plans

Closure plans for 15 RCRA sites (i.e., sites contaminated with wastes defined as hazardous by RCRA) were written and submitted to DOE and EPA.

#### EPA RCRA Audit

In April 1986, the ICPP was audited by the EPA. In preparation for this audit, all WINCO departments were sensitized to some of the requirements imposed by RCRA. Several Satellite Staging Areas (SSAs) were set up near hazardous-waste-generating processes. Personnel using the SSAs were trained in SSA requirements and in the use of the Spill Prevention, Control, and Countermeasures (SPCC) Plan.

On the basis of this first EPA audit, no non-compliance items have been cited against the ICPP by the EPA.

## Polychlorinated Biphenyl (PCB) Cleanup

A PCB-containing transformer was drained, disconnected, and removed from an EG&G Idaho-owned power substation within the fenced area of the ICPP. The transformer had leaked an estimated 400 gal of transformer fluid containing 179 ppm PCBs.

sing EPA Region X guidelines, all soil containing greater than 10 ppm PCB concentrations was boxed, labeled, and disposed of off site. The concrete transformer pad was removed intact and transported and disposed of off site. All contaminated materials and equipment were either decontaminated or placed in DOT-approved drums, labeled, and shipped off site for disposal.

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#### \_RA/CERCLA Site Characterization

Construction of a warehouse had been scheduled to be built on an area of the ICPP which was listed as a RCRA site since it had been used for the temporary storage of drums of paint solvents and thinners in the past. Construction was delayed until an outside contractor (the University of Utah) was hired on an expedited basis to characterize the site by sampling and analyzing soil samples using EPA-approved methods. Characterization was successfully completed, and the absence of hazardous materials was confirmed, allowing construction to proceed.

#### Overflow System for Bulk Storage Tanks

An emergency project to provide containment of bulk liquid chemicals in the event of tank overflows was completed. The project included the installation of catch tanks and the closure and abandonment of several French drains and lime pits.



Westinghouse Idaho
Nuclear Company, Inc.
FORM WINCO-5013 (Rev. 3-84)

**NOTEGRAM** 

Date 8/20/85

From D. Town Foland Dept. N# IS

Excess soil from the CPP-718 PCB cleanup can be disposed of ar used as clean soil. The laboratory analysis indicates hat this soil may contain PCBs but at less than 10 ppm. The soil is not considered a safety or environmental consern. This soil has also been radiologically surveyed and is considered clean.

Please note that you can use the soil to fill in lew spots on the north side of CPP-613 as long as your do not create additional drainage problems to the manhale located in the vicinity.

Put IT IN WRITING - WRITTEN MESSAGES SAVE TIME, PREVENT ANNOVING INTERRUPTIONS AND ERRORS.

	A	В	C	L	E	F	G
32	SUMMARY TABLE OF RI	SK-BASED SOIL SCREENL	NG EQU	ATIONS			
33	DOCUMENT: DOE/ID-103	40(91), JULY 1991					
34	NON-RADIOACTIVE						······································
35		:	!		ORGANIC CONTAMINAL	TS	
	AROCHLOR 1260 (PCBS) OCCUPATIONAL				RESIDENTIAL (a)		
37							99.9
38		Carcinogens		Noncarcinogens	Carcinogens		Noncarcinogens
39		Risk at 1E-06		HQ = 1	Risk at 1E-06		HQ = 1
40		mg/kg (mg/L)		mg/kg (mg/L)	mg/kg		
41							
42	Soil Ingestion	0.74025974		0	0,083116883	1	O
43	Inhalation of						
44	Fugitive Dust	#DIV/0!		0	#DIV/0!		0
45	Inhalation of						
46	Volatiles	#DIV/0!		0	#DIV/0!		0
47	Groundwater						
48	Ingestion (c)	NA		NA	3.81E+00		0
49	External						
50	Exposure	NA		NA	NA		NA

\*No reference doses given in the documentation for inhalation risks for PCBs.
Although there is an estimated risk based concentration for groundwater ingestion, use of the CW Screen model will indicate that PCBs will not reach the groundwater prior to 1,000 + years.

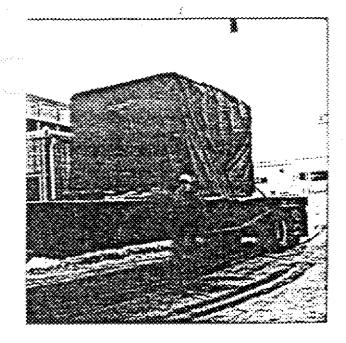
Torra	ittal memo 7671 #ofpages >
Brian Four	Carly allet
_ W( N CD	Co.
Dept.	Phone #
Fax / 52/ -0// 5	Fex #

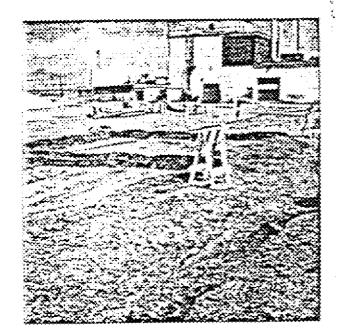
Swar CPP-61 remediation for RCBs & removal
of transformers under Uhlities upgrade & expansion

Some of the PCB contained natural/ transformers were Stored on platic in SWMU CIP-51

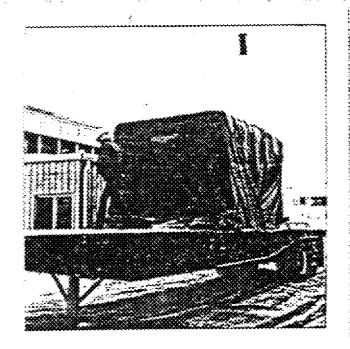
Most ver absorbed, the esplit was washed with a detayet then daid. The notacial was wifely followed. The notacial was wifely followed with a detayet additional clemy with Soap. (per tom burden).

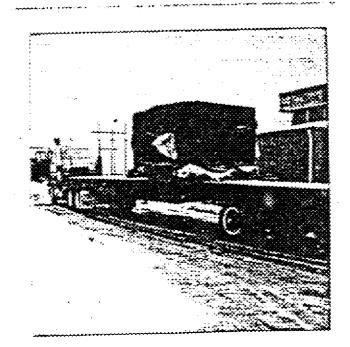
The versor som of the 5h ff was stand in CHO-ST is contact charge from Chem Societies (Attington OR) to CLSPCI. The Change was, in part, do to CLSPCI'S abolity to ob find dishaction of PCB's (allo fater than around of OR's restrictions were too difficult to get the wake direct.

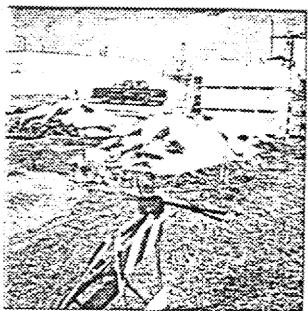


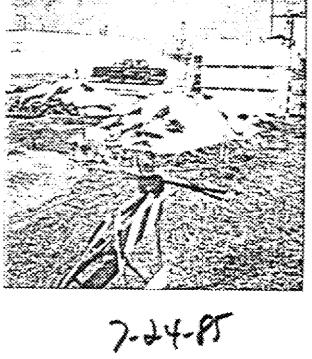


7-24-85

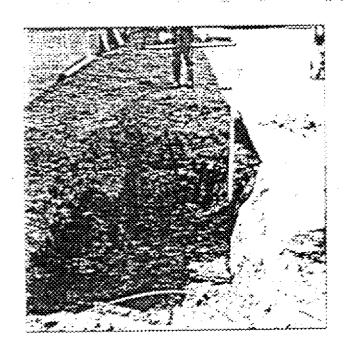




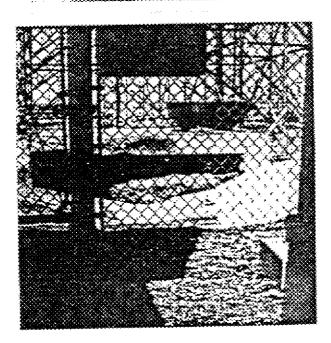




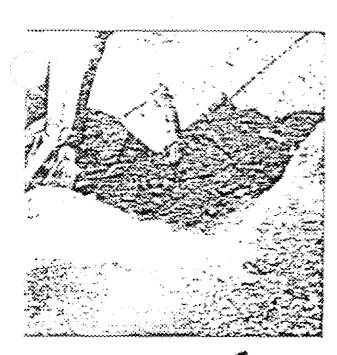
7-24-82



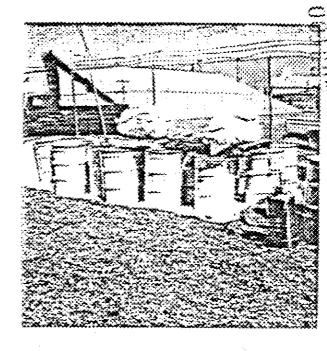
J-74-82



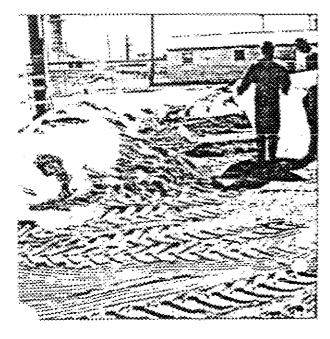
7-24-85



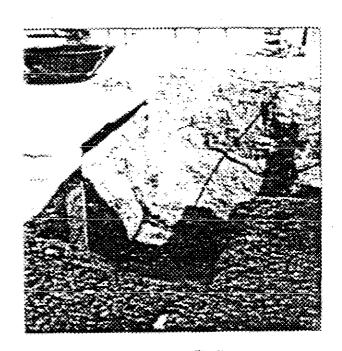
7-24-85



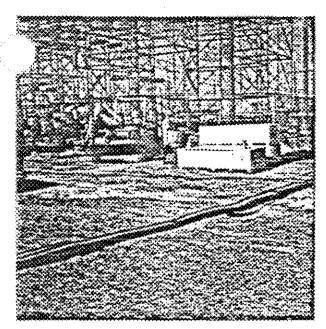
7-14-85



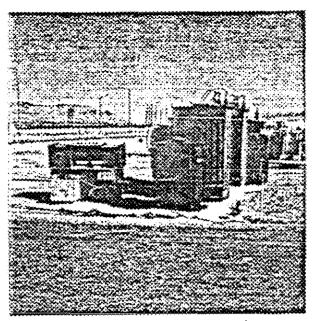
7-14-45



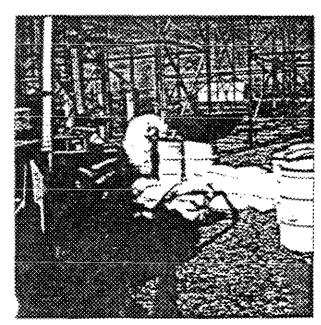
7-24-85



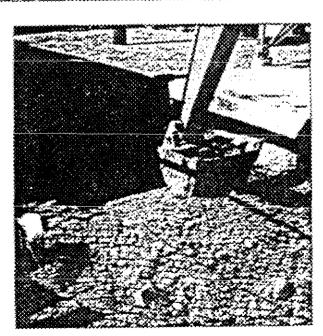
7-19-85 Equipment



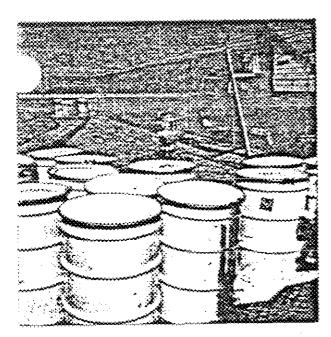
7-19-85 PCB & Gurpat From Gob Upop Tob



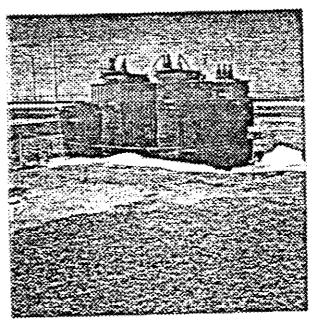
7-19-85 Filling The Bruns with per & Dint



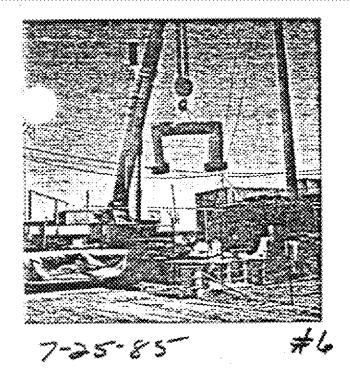
7-19-85 PCB SPILL Clean up

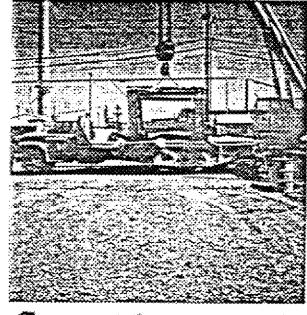


7-19-85 Pell in 17-e Drums FUR Shippment



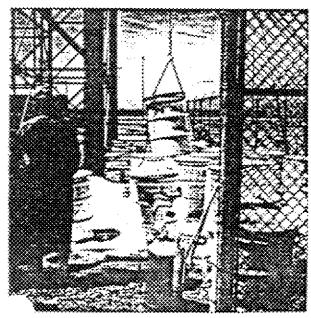
7.19.85 PCBS 606 Eguspins T From 4729 706





7-25-85

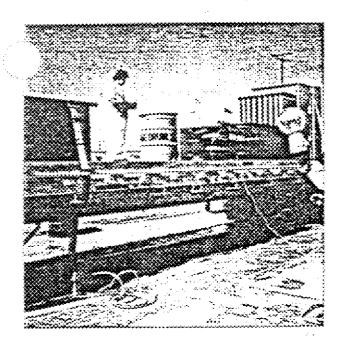
#7

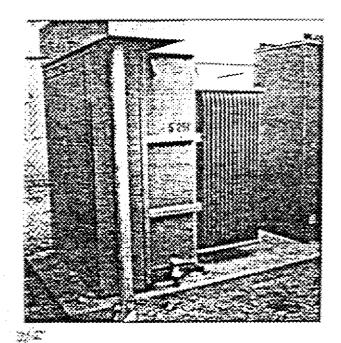


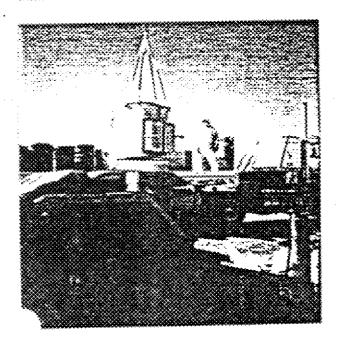
7-31-85

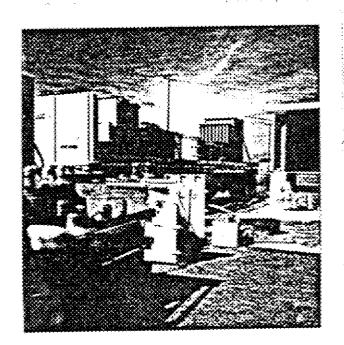


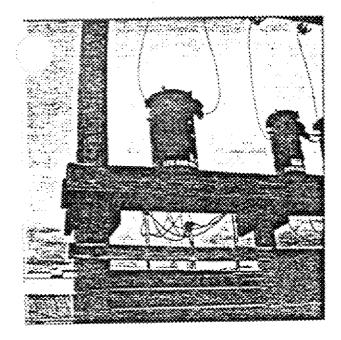
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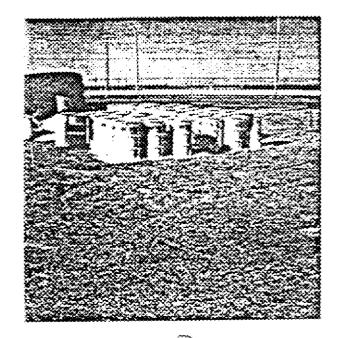


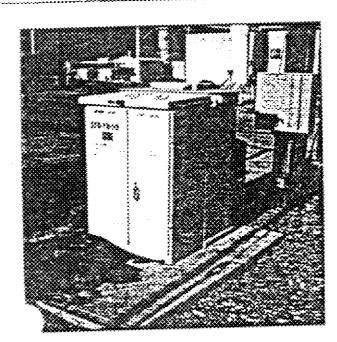


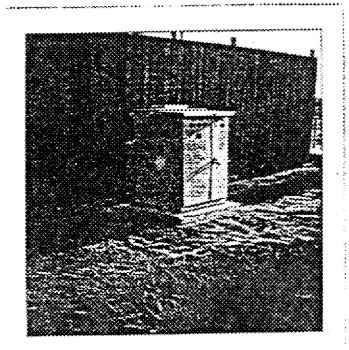


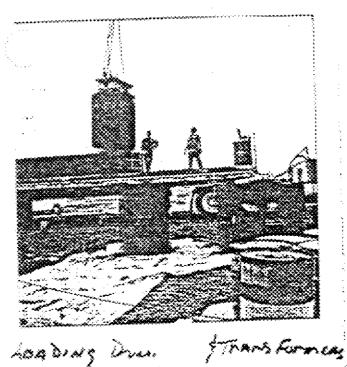




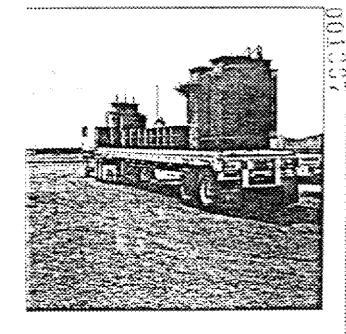


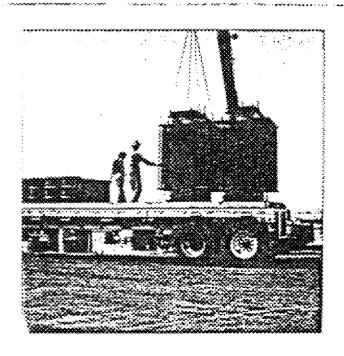


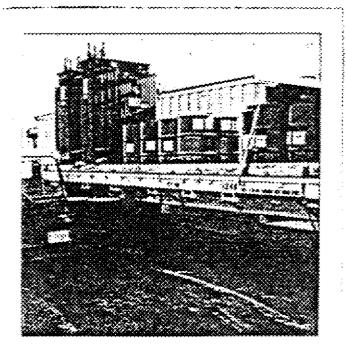




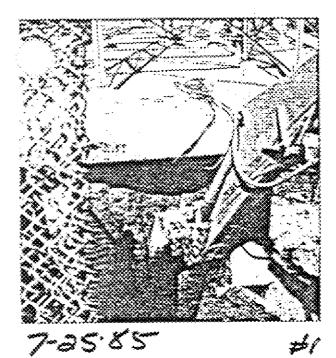
Loading Dru. FOR Shipment

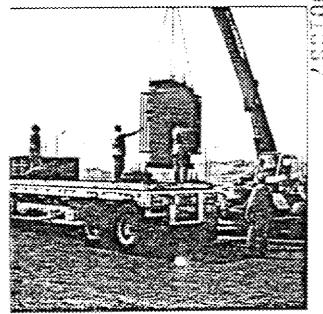


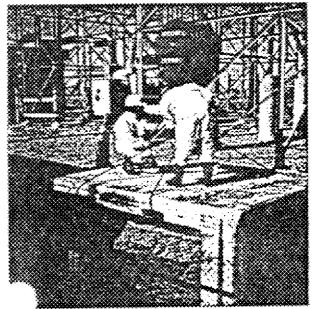










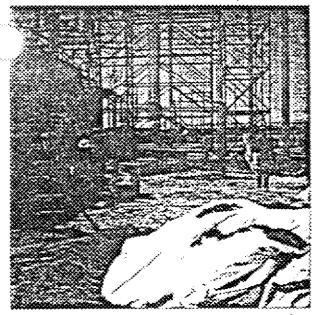




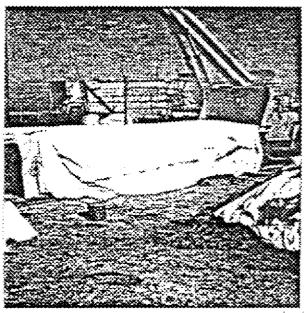


7-25-85

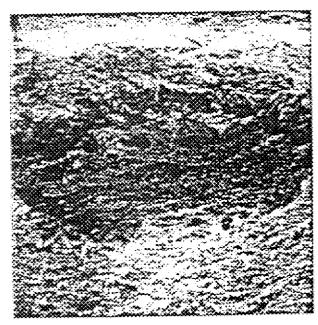
#2



725-85 #5



7-25-85" #9



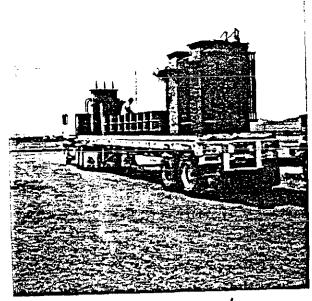
7-29-85 KAST PERS Removed



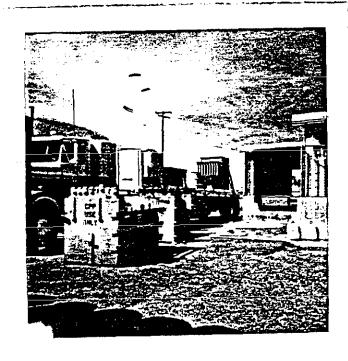
7.31.85

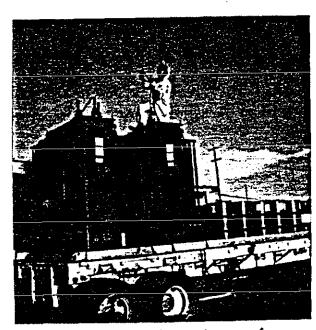


PCB Liquid - 21/1 while Transfering - 01/18 Drems



FOR Shipment WIAH
BY LIS POLLUTION FOR DISPOSAL





Transfering 28 011 To 55 get Divers.

